

CLAIMS

ANTIANGIOGENIC ACTIVE IMMUNOTHERAPY.

- 5 1. Method for active vaccination characterized by the administration of a vaccine preparation, adjuvated or not, comprising polypeptides and/or oligonucleotides coding for proteins directly associated to an increment of the angiogenesis, and variants there of.
2. Method according to claim 1, wherein the proteins directly associated to an
10 increment in angiogenesis belong to the family of the Vascular Endothelial Growth Factor (VEGF).
3. Method according to claims 1 and 2, wherein the protein is one of the VEGFA isoforms.
4. Method according to claims 1, 2, and 3, wherein the protein is the VEGFA
15 121.
5. Method according to claims 1, 2, and 3, wherein the protein is the VEGFA 165.
6. Method according to claims 1, 2, and 3, wherein the protein is the VEGFA 189.
- 20 7. Method according to claims 1 and 2, wherein the protein is one of the VEGFB isoforms.
8. Method according to claims 1, 2 and 7, wherein the protein is the VEGFB 167.
9. Method according to claims 1 and 2, wherein the protein is the VEGFC.
- 25 10. Method according to claims 1 and 2, wherein the protein is the VEGFD.
11. Method according to claims 1 and 2, wherein the protein is the PLGF.
12. Method according to claim 1, wherein the proteins directly associated to an increment in angiogenesis belong to the group of receptors and co-receptors of the VEGF.
- 30 13. Method according to claims 1 and 12, wherein the protein is the VEGFR1.
14. Method according to claims 1 and 12, wherein the protein is the VEGFR2.
15. Method according to claims 1 and 12, wherein the protein is the VEGFR3.
16. Method according to claims 1 and 12, wherein the protein is the NRP1.
17. Method according to claims 1 and 12, wherein the protein is the NRP2.
- 35 18. Method according to claims from 1 to 17, wherein the immunogens are mutants derived from human VEGF family or their receptors.

19. Method according to claims from 1 to 18, wherein the antigens are of autologous nature.
20. Method according to claims from 1 to 18, wherein the antigens are of heterologous nature.
- 5 21. Method according to claims from 1 to 20, wherein the immunogens are synthetic, recombinants, chimeric or natural.
22. Method according to claims from 1 to 21, wherein the immunogens are of peptidic nature.
- 10 23. Method according to claim 1, wherein the immunogens are a mixture of at least two of the molecules described in claims from 2 to 22.
24. Method according to claims from 1 to 23, for the treatment of tumors in mammals.
25. Method according to claims from 1 to 23, for the treatment and prevention of tumors in humans.
- 15 26. Method according to claims from 1 to 23, for the treatment of diseases characterized by an increment in the angiogenesis, as in malignant neoplasia and their metastasis in humans.
- 20 27. Method according to claims from 1 to 23, for the treatment of entities characterized by an increase in the angiogenesis, as occurs in benign neoplasia.
28. Method according to claims from 1 to 23, for the treatment of diseases characterized by an increment in the angiogenesis, as occurs in acute and chronic inflammatory processes.
- 25 29. Method according to claims from 1 to 23, for the treatment of diseases characterized by an increment in the angiogenesis, as occurs in autoimmune processes.
- 30 30. Method according to claims from 1 to 23, for the treatment of diseases characterized by an increment in the angiogenesis, as occurs in ocular alterations.
31. Method according to claims from 1 to 23, for the treatment of diseases characterized by an increment in the angiogenesis, specifically in affective animals and cattle.
- 35 32. A vaccine composition comprising polypeptides and/or oligonucleotides coding for proteins directly associated to an increment of the angiogenesis, and variants thereof, administered in the presence or not of a pharmaceutically accepted adjuvant

33. A vaccine composition according to claim 32, wherein the associated protein is the Vascular Endothelial Growth Factor (VEGF)
34. A vaccine composition according to claims 32, and 33, wherein the associated protein is one of the VEGFA isoforms.
- 5 35. A vaccine composition according to claims 32, 33, and 34, wherein the associated protein is the VEGFA 121.
36. A vaccine composition according to claims 32, 33 and 34, wherein the associated protein is the VEGFA 165.
37. A vaccine composition according to claims 32, 33 and 34, wherein the associated protein is the VEGFA 189.
- 10 38. A vaccine composition according to claims 32 and 33, wherein the associated protein is one of the VEGFB isoforms.
39. A vaccine composition according to claims 32, 33 and 38, wherein the associated protein is the VEGFB 167.
- 15 40. A vaccine composition according to claims 32, and 33, wherein the associated protein is the VEGFC .
41. A vaccine composition according to claims 32, and 33, wherein the associated protein is the VEGFD.
42. A vaccine composition according to claims 32, and 33, wherein the associated protein is the PIGF
- 20 43. A vaccine composition according to claim 32, wherein the associated protein belongs to the group of VEGF receptors and co-receptors
44. A vaccine composition according to claims 32, and 43, wherein the associated protein is the VEGFR1.
- 25 45. A vaccine composition according to claims 32, and 43, wherein the associated protein is the VEGFR2.
46. A vaccine composition according to claims 32, and 43, wherein the associated protein is the VEGFR3.
47. A vaccine composition according to claims 32, and 43, wherein the associated protein is the NRP1.
- 30 48. A vaccine composition according to claims 32, and 43, wherein the associated protein is the NRP2.
49. A vaccine composition according to claims from 32 to 48, characterized by containing as immunogens mutants derived from human VEGF family, their receptors and co-receptors
- 35 50. A vaccine composition according to claims from 32 to 49, wherein the antigens are of autologous nature.

51. A vaccine composition according to claims from 32 to 49, wherein the antigens are of heterologous nature.
52. A vaccine composition according to claims from 32 to 51, wherein the immunogens are synthetic, recombinant, chimeric or natural.
- 5 53. A vaccine composition according to claims from 32 to 51, wherein the immunogens are of peptidic nature.
54. A vaccine composition according to claim 32 characterized by comprising as immunogens a mixture of at least two of the molecules described in claims from 33 to 53.
- 10 55. A vaccine composition according to claims from 32 to 54 wherein the immunogen is administered as part of plasmidic vectors.
56. A vaccine composition according to claims from 32 to 54 wherein the immunogen is administered as part of viral vectors.
57. A vaccine composition according to claims from 32 to 54 wherein the immunogen is administered as a polypeptide.
- 15 58. A vaccine composition according to claims from 32 to 57 wherein the immunogen is administered associated covalently or not to an adjuvant.
59. A vaccine composition according to claim 58, wherein the adjuvant is particulate.
- 20 60. A vaccine composition according to claim 59, wherein the adjuvant is specifically the recombinant particle of Hepatitis B Core Antigen.
61. A vaccine composition according to claim 59, wherein the adjuvant is specifically the recombinant particle of Hepatitis C Core Antigen.
62. A vaccine composition according to claim 59, wherein the adjuvant is specifically VSSP.
- 25 63. A vaccine composition according to claim 58, wherein the adjuvant is of protein nature.
64. A vaccine composition according to claim 63, wherein the adjuvant is the OPC protein.
- 30 65. A vaccine composition according to claim 63, wherein the adjuvant is the KLH protein.
66. A vaccine composition according to claim 58, wherein the adjuvant is an emulsion.
67. A vaccine composition according to claim 66, wherein the adjuvant is the Freund adjuvant or its derivatives.
- 35 68. A vaccine composition according to claim 66, wherein the adjuvant is Montanide ISA 51.